Oregon
Water Conditions Report
December 17, 2018

OREGON
WATER RESOURCES
DEPARTMENT

Measureable snow water equivalent (SWE) remains low across much of the state. Amounts of SWE being measured are generally less than 9 inches, with most of the snow only at higher elevations. Statewide snowpack is 60 percent of normal primarily due to lack of storms coupled with warmer than normal temperatures. Consequently, much of the precipitation has fallen in the form of rain. Oregon statewide water year precipitation at NRCS SNOTEL sites is 69 percent of normal.

While recent rain events have been beneficial, precipitation over the past two weeks has still been below-normal across the state. Most of western Oregon has been two to five inches below normal for this time of year. Across central and eastern Oregon precipitation has been slightly below normal. Precipitation for the month of November was well below-normal for most of the state.

Temperatures over the past two weeks have been cooler than normal in central and eastern regions of the state. Temperatures ranged from two degrees below normal to four degrees above normal in western Oregon. For the month of November, temperatures were well above normal west of the Cascades and normal to below normal to the east.

Over the next 8 to 14 days, the NOAA Climate Prediction Center is forecasting above-normal temperatures along the coast with normal temperatures for the central parts of the state. Below normal temperatures are predicted for the southeastern Oregon. The precipitation probability outlook is for above-normal precipitation for the entire state. The most recent three month outlook indicates increased chances of above-normal temperatures statewide. The precipitation outlook for the same period calls for equal chances of above or below-normal precipitation for all of the state. The next long-term outlook will be issued on December 20, 2018.

El Niño is expected to form and continue through the Northern Hemisphere winter 2018-19. For more insight, refer to the December 13, 2018 diagnostic discussion issued by the Climate Prediction Center. Another excellent source of information is the latest ENSO blog on the climate.gov website. The Climate Prediction Center provides updates on a regular basis. The next diagnostics discussion is scheduled for January 10, 2019.

Statewide streamflows for November were 50 percent of normal. This is down from 56 percent seen for the month of October. Regionally for November, streamflow conditions were about 60 percent east of the Cascades and only 30 percent to the west. More recent data indicate that despite recent rain events flows are even lower, ranging from about 20 percent in the Umpqua to over 70 percent in the Malheur.

USACE Reservoirs: Rogue: Currently the system is 30 percent full and 6 percent below rule curve. Lost Creek is maintaining an outflow of about 1,170 cfs with inflows currently at 1,340 cfs. Applegate outflows have are being maintained at 100 cfs with inflows now at 380 cfs.

Willow Creek: Currently the project is 15 percent full and 31 percent below rule curve. Inflows have dropped to about 2 cfs while the project has been maintaining an outflow of 1.6 cfs. The project goal is to continue to capture inflows to get back to rule curve.

Willamette: The Willamette system continues to draft while augmenting mainstem flows. The project is currently effectively empty and very close to the rule curve. The flow in the Willamette River at Albany is about 7,280 cfs and at Salem flows are about 12,800 cfs.

From the USBR: Storage contents in Reclamation's Pacific Northwest Region reservoirs in Oregon are well below normal for this time of year and range from 21 percent of average in the Malheur River system to 83 percent of average in the Owyhee. All reservoirs are much lower than at this same time last year. The current operation at all reservoirs is to release winter minimum flows to allow the reservoirs to fill over the winter. It is anticipated this operation will continue for the next few months. Scoggins Reservoir typically requires flood risk management (FRM) operations during the winter; however, that reservoir is well below its space requirements for this time of year and does not require FRM operations at this time.

In north central Oregon, McKay Reservoir is at 13 percent of capacity, this is below normal for this time of year. In the Willamette, Scoggins Reservoir is currently 29 percent full. Central Oregon reservoirs are between 12 (Ochoco) and 68 (Crescent Lake) percent of capacity. Eastern Oregon reservoirs (not considering Thief Valley) are all at or below 34 percent now with Warm Springs at 4 percent and Owyhee at 34 percent of capacity. Rogue Basin reservoirs are between 5 and 32 percent of capacity. Upper Klamath Lake is currently at 39 percent of capacity.

The most recent update to the US Drought Monitor is showing a slight degradation in conditions in western Oregon since last week. Indicators now to point toward D3 (Extreme Drought) in over 36 percent of the state. The report also shows 86 percent of the state is in D2 (Severe Drought), 98 percent is listed as in D1 (Moderate Drought) and 100 percent of the state is listed as D0 (Abnormally Dry). As of November 18, thirty-one Oregon counties are under drought designation by the US Department of Agriculture. Eleven counties are now under state-declared drought status. Refer to the Oregon Water Resources Department web page for the latest information.

Wildfire conditions have abated across the state with fire danger now at low levels. Refer to the Oregon Department of Forestry wildfire blog for the latest updates. The next wildland fire outlook update is scheduled for January 1, 2019. More information can also be accessed through the Northwest Interagency Coordination Center website. Another recommended resource is the Oregon Office of Emergency Management's RAPTOR incident mapping program which includes current situational information, such as wildfire perimeters, thermal satellite, fire evacuation boundaries, and air quality info.

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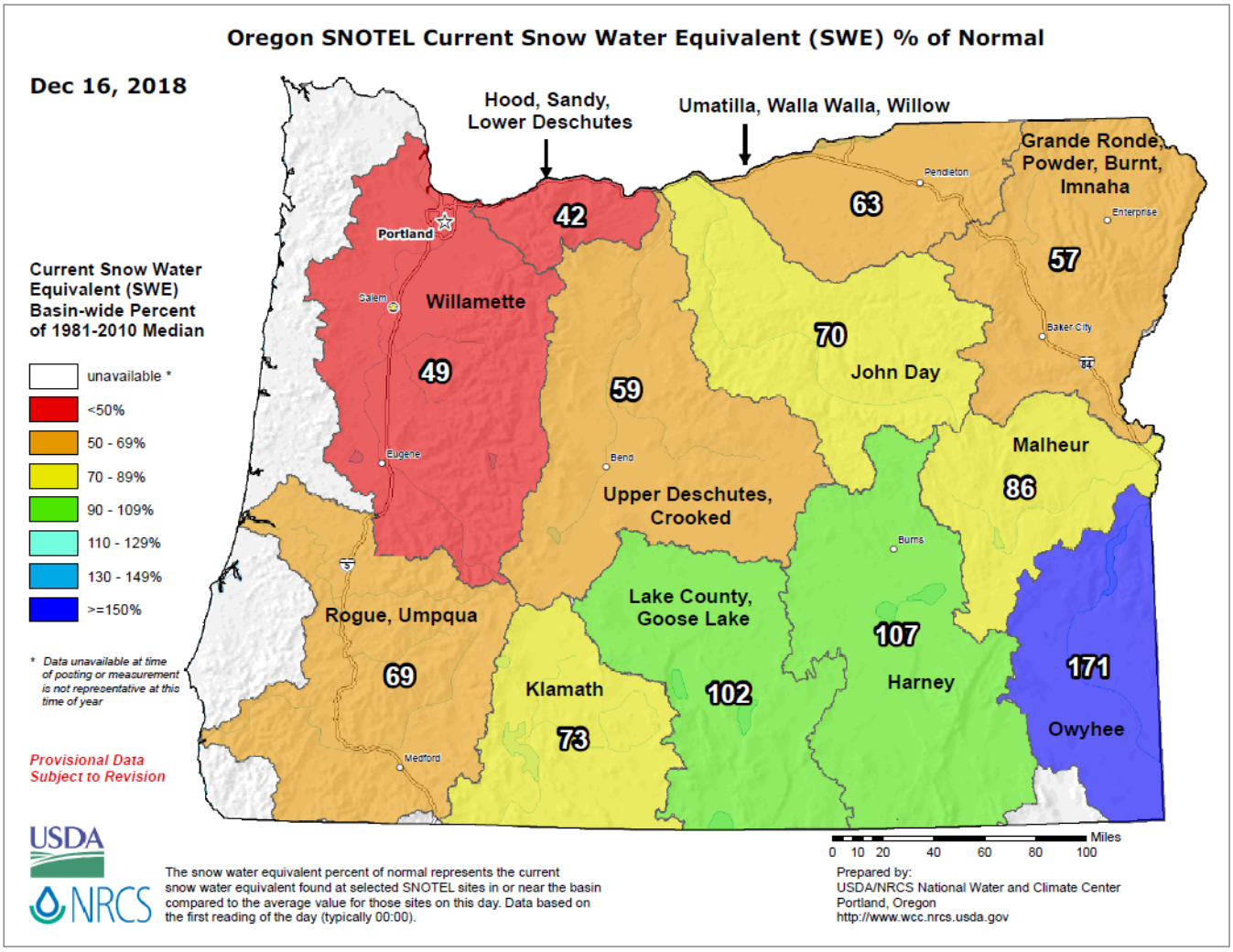
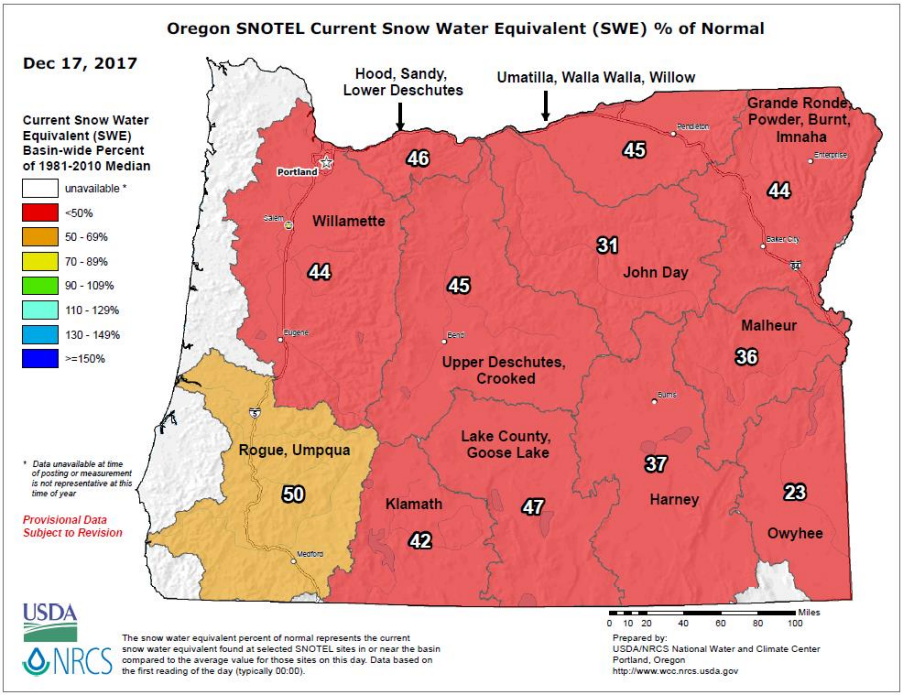
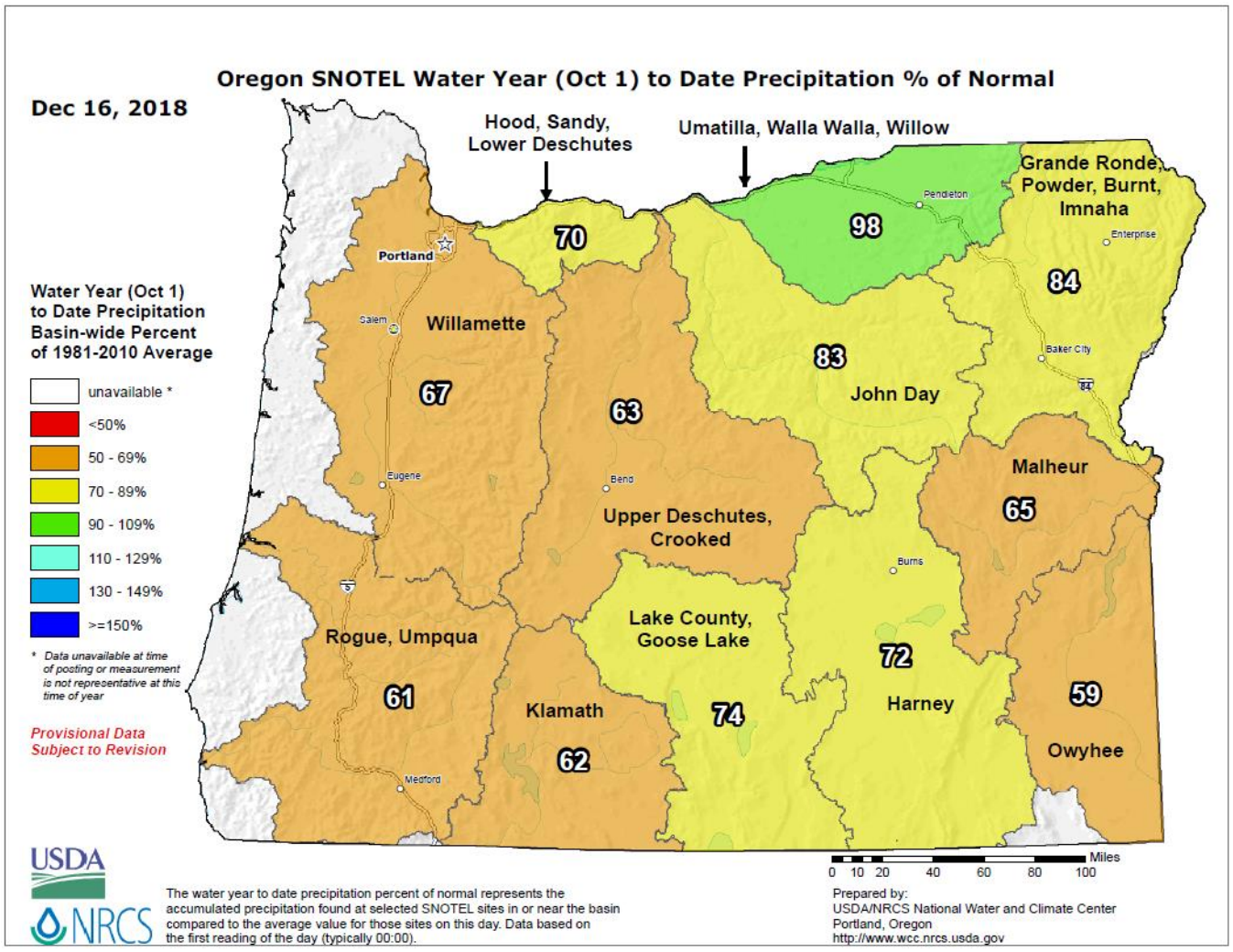
Snow Water Equivalent - Percent of Normal



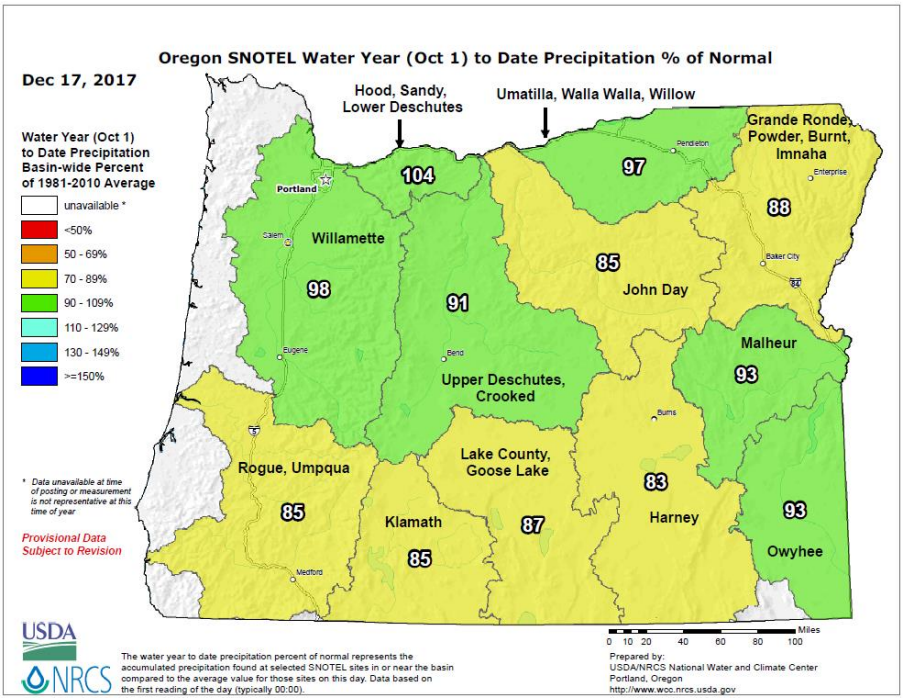
Compared to this time last year -



Precipitation (Mountain) - Percent of Normal



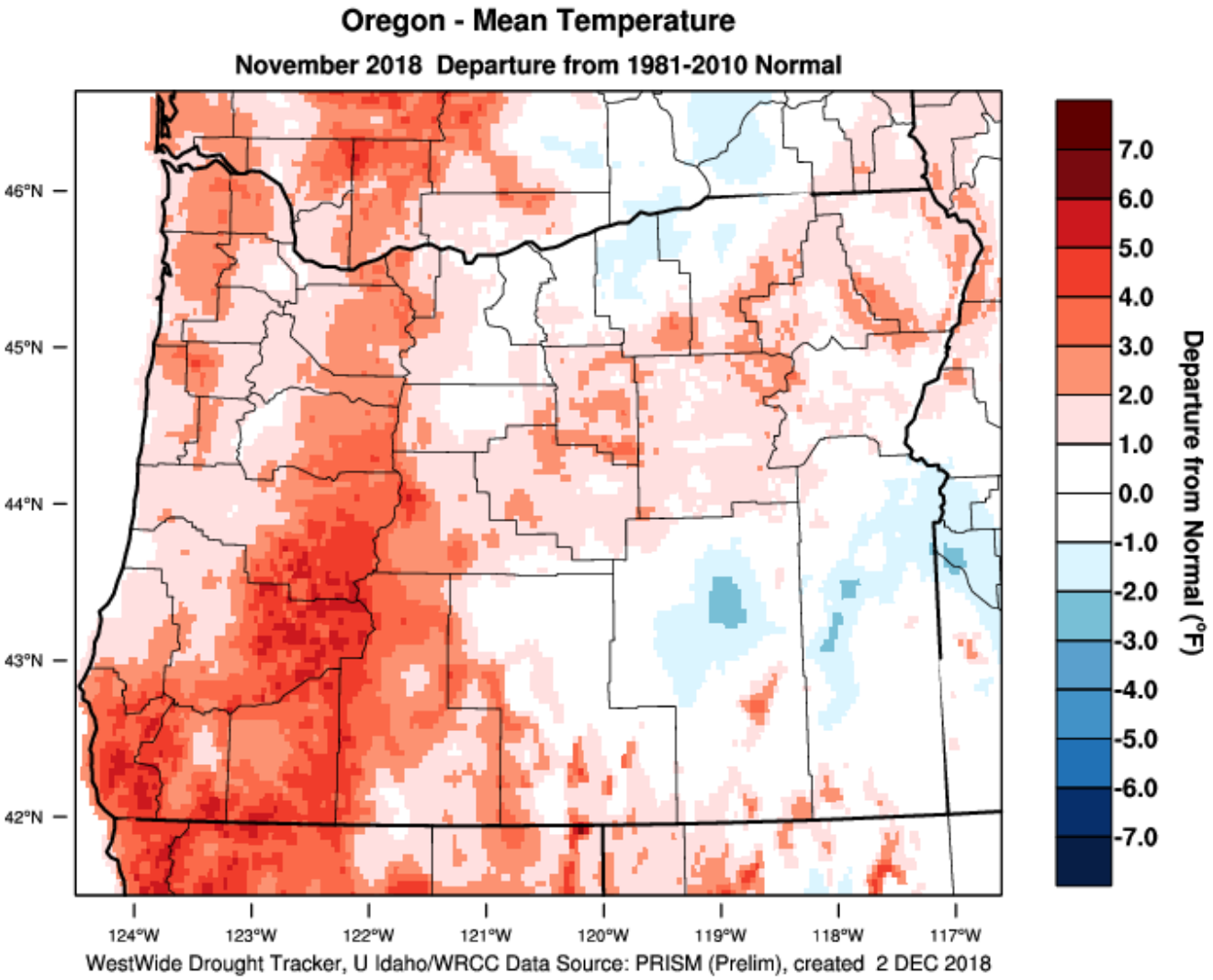
Compared to this time last year –



Temperature – (1 Month) Departure from Normal

Website: https://wrcc.dri.edu/wwdt/index.php?region=or

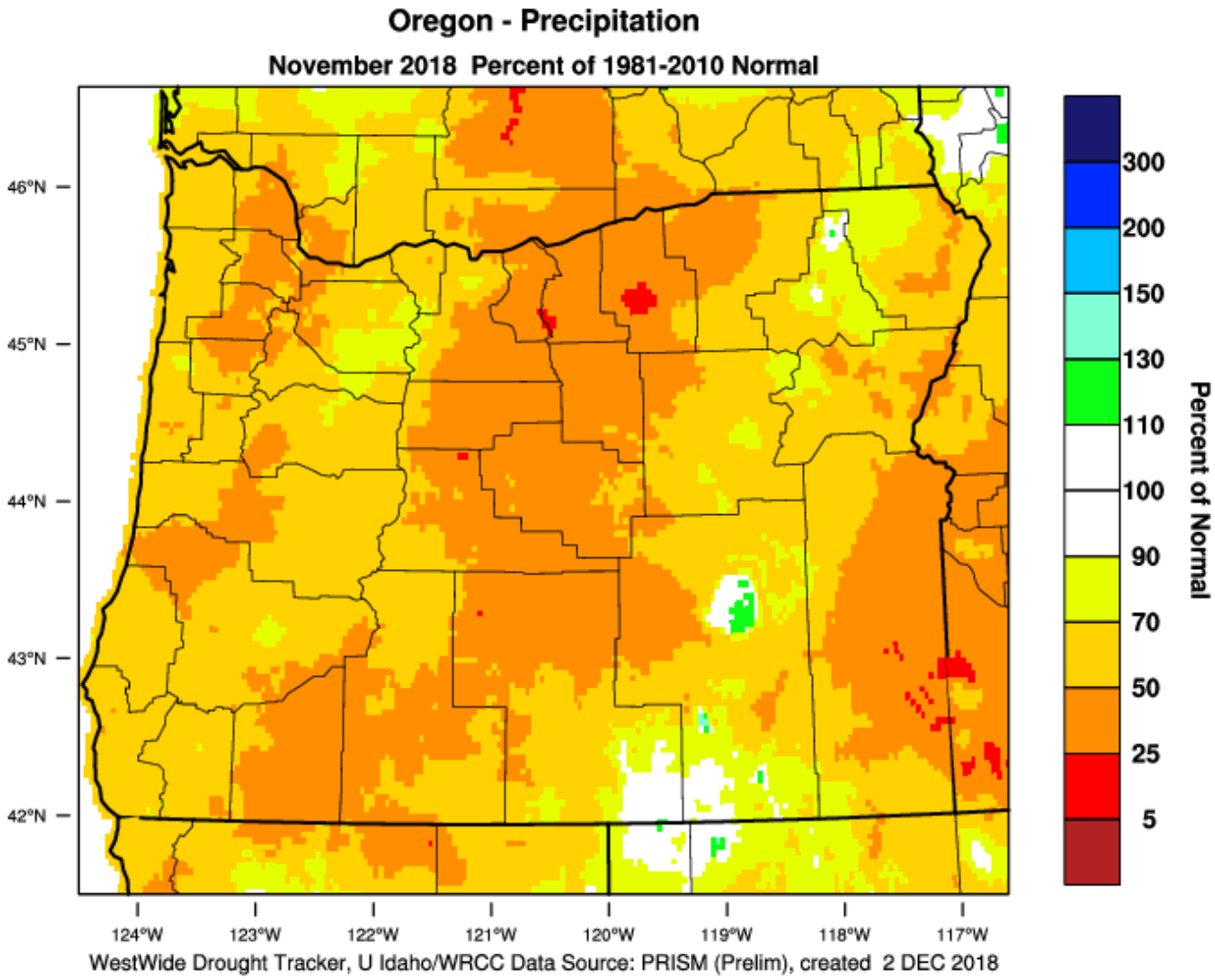
PRISM > Temperature Anomaly 1 Month > Oregon



Precipitation – (1 Month) Percent of Normal

Website: http://www.wrcc.dri.edu/wwdt/index.php?folder=pon1

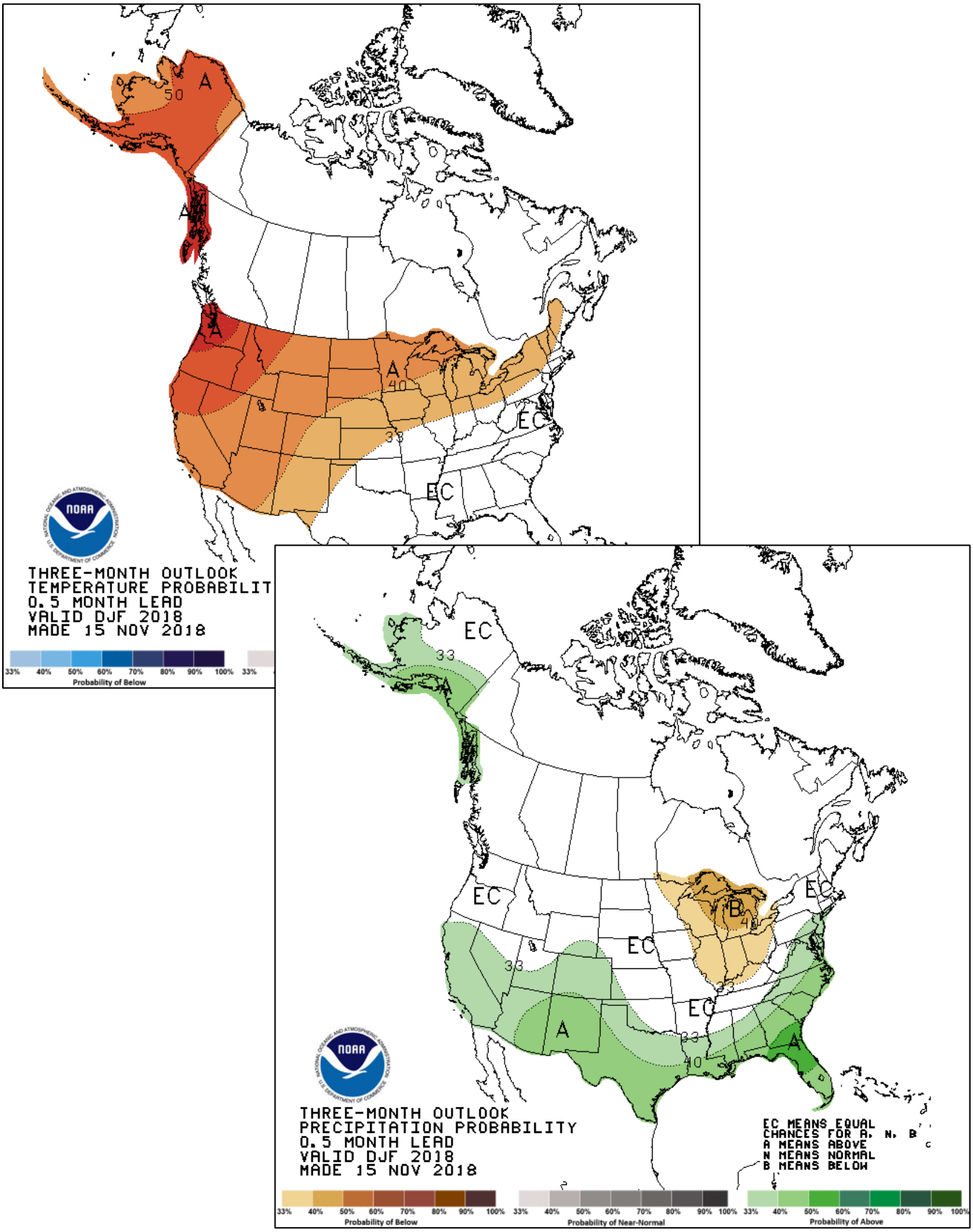
PRISM > Precipitation Anomaly 1 Month > Oregon



Three Month Temperature and Precipitation Outlook

December through February

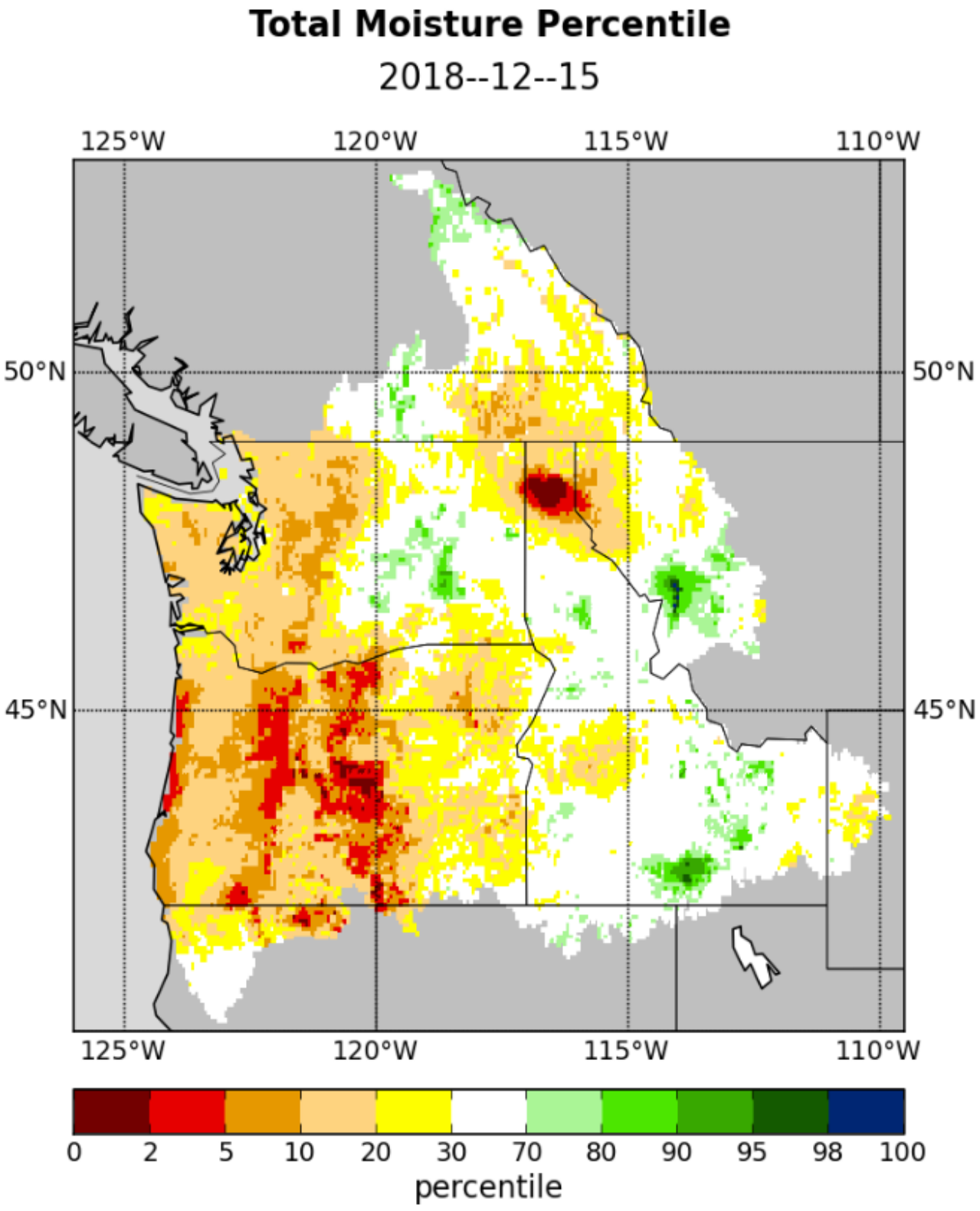
Website: http://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=1



Total Moisture - Percentile

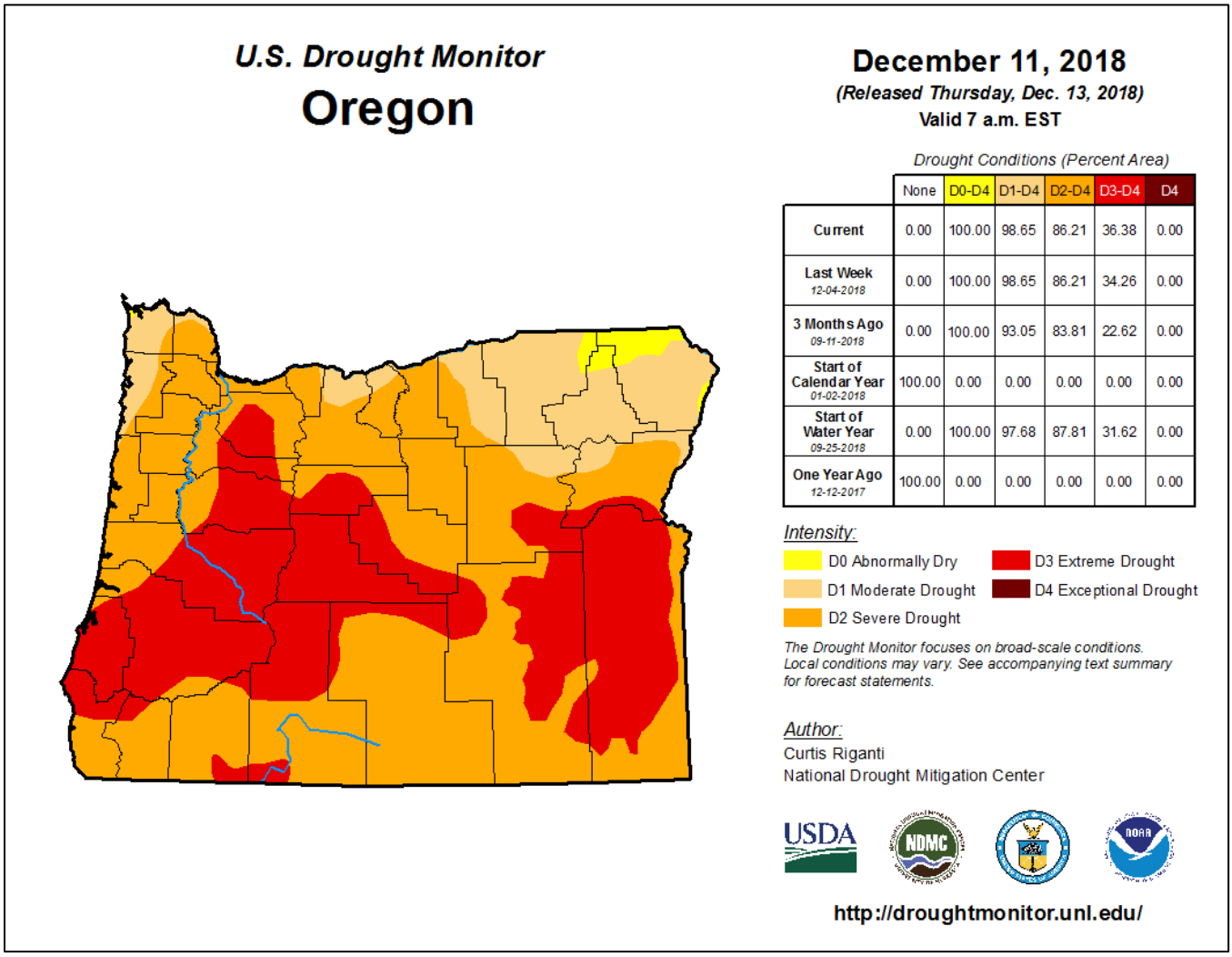
Current percentiles for soil moisture, snow water equivalent, and total moisture storage.

Website: http://www.hydro.ucla.edu/SurfaceWaterGroup/forecast/monitor_pnw/index.shtml

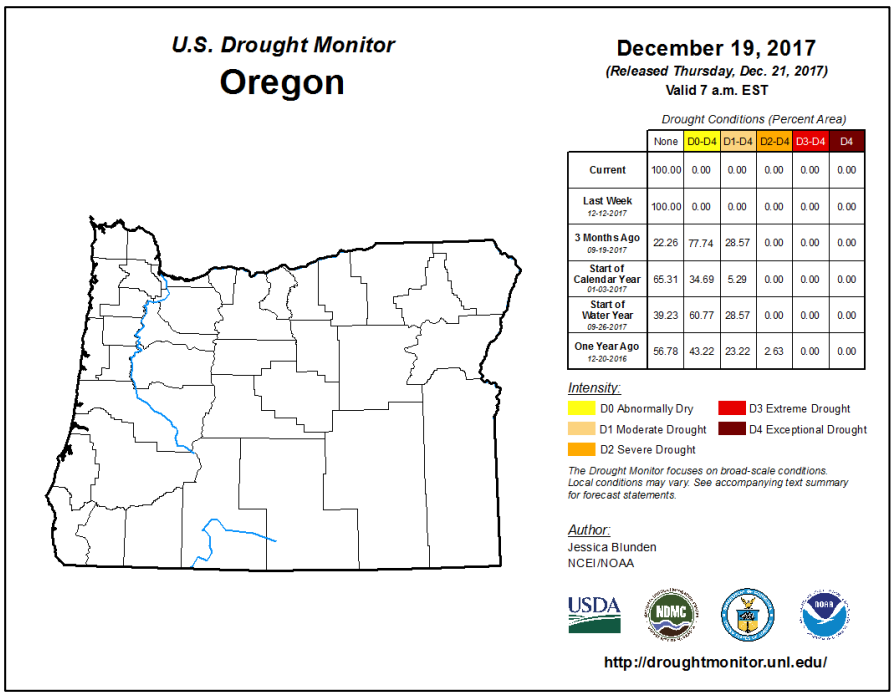


U.S. Drought Monitor for Oregon

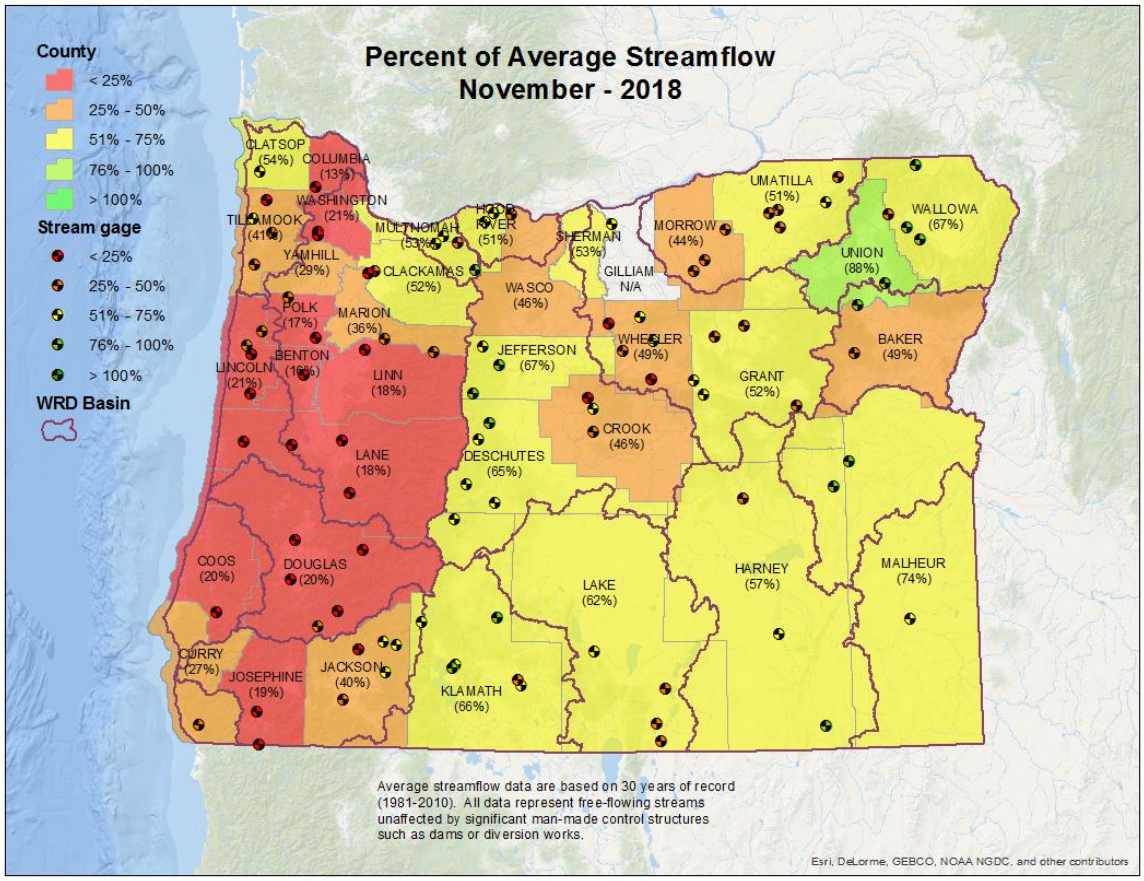
Website: https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?OR



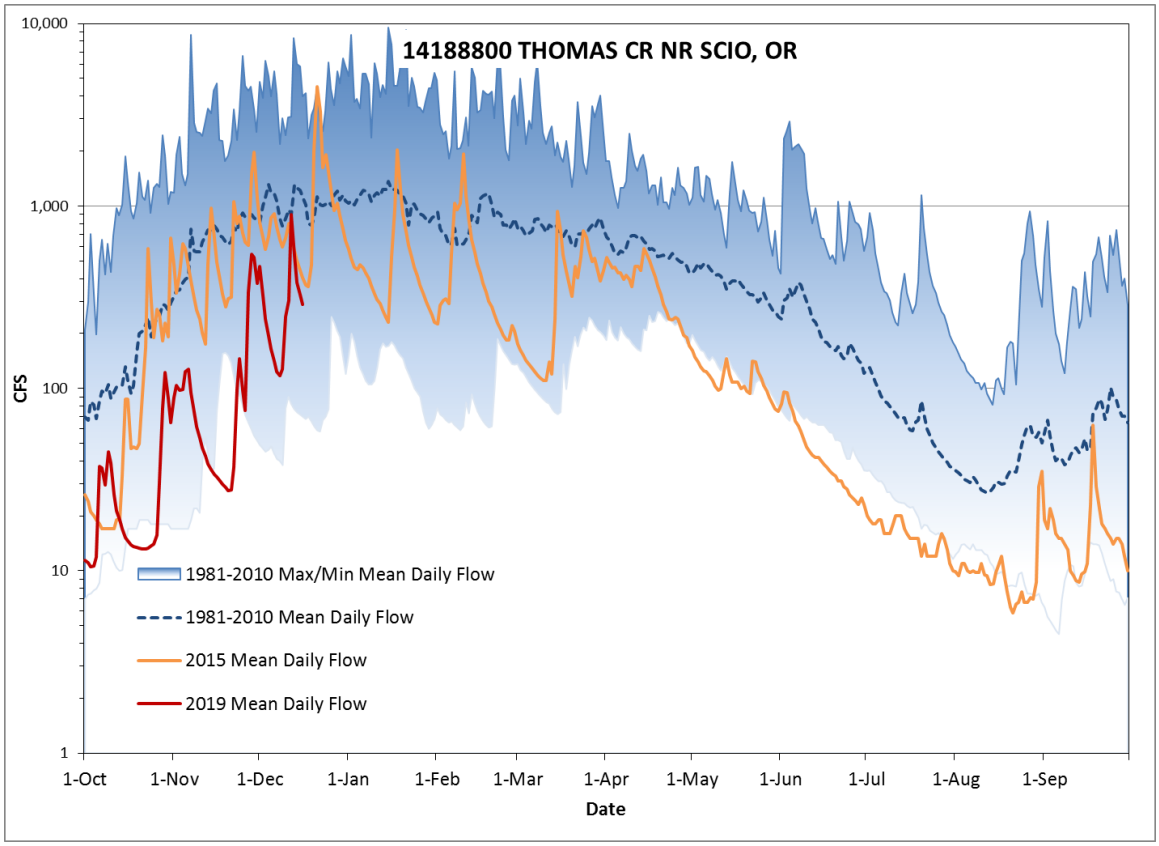
Compared to this time last year:



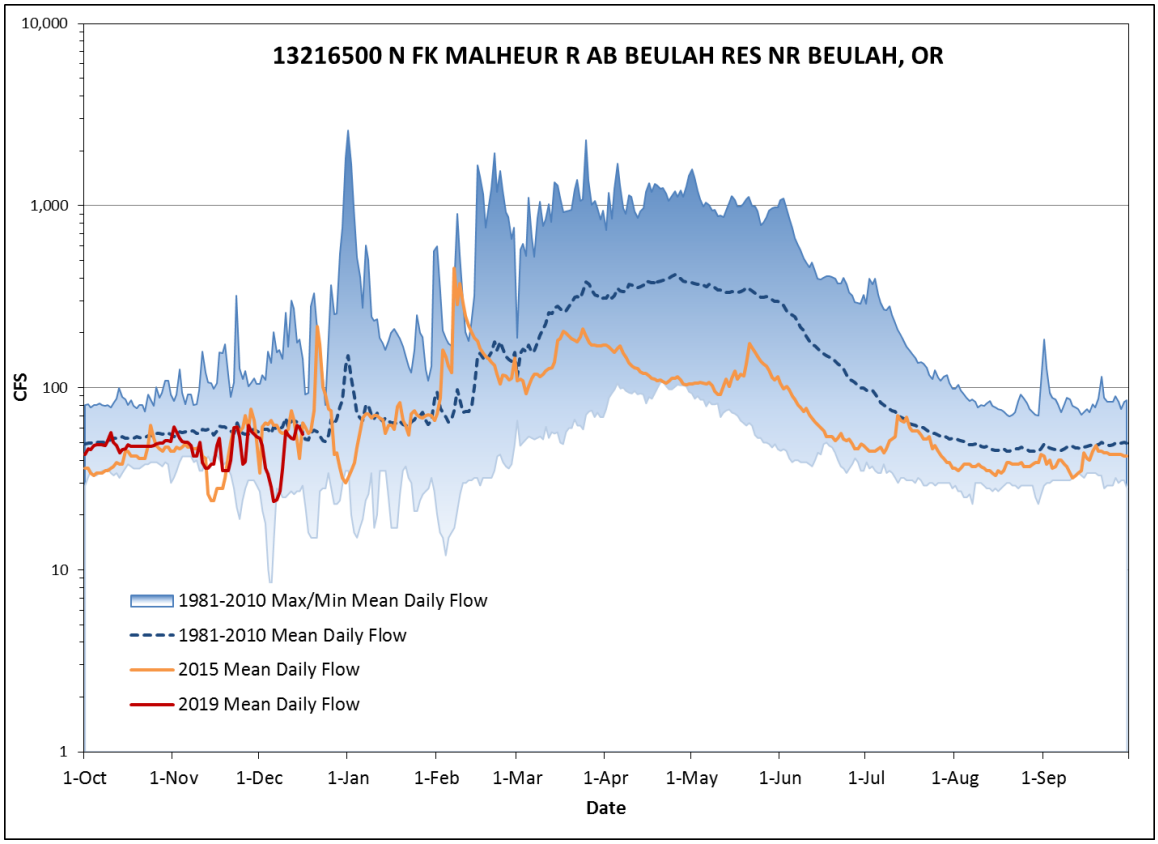
Streamflow Conditions by County - November



Streamflow Conditions – Willamette Basin (Linn County)



Basin Streamflow Conditions – Malheur Basin (Malheur County)



Basin Streamflow Conditions – South Coast Basin (Coos County)